

**TEST CASES  
FOR  
EPA TEMPERATURE MODEL  
QUALITY CONTROL**

**TEST CASE A**

**100-MILE RIVER WITH 100 EQUAL SEGMENTS.  
TRAVEL TIME = 1 MILE/DAY  
INITIAL CONCENTRATION = 20 UNITS  
FIRST-ORDER DECAY – RATE CONSTANT = 0.20 DAYS<sup>-1</sup>**

**TEST CASE B**

**100-MILE RIVER WITH 100 EQUAL SEGMENTS.  
TRAVEL TIME = 1 MILE/DAY  
INITIAL CONDITIONS =  $10 + 10 \sin(2\pi t/P)$   
P = 10, 20, 50, 100 DAYS**

**TEST CASE C**

**100-MILE RIVER WITH 100 EQUAL SEGMENTS.  
TRAVEL TIME = 1 MILE/DAY  
INITIAL CONDITIONS =  $20 u_1(t)$  at  $X = 0$**

**TEST CASE d**

**100-MILE RIVER WITH 100 UNEQUAL SEGMENTS.  
TRAVEL TIME = 1 MILE/DAY  
INITIAL CONDITIONS =  $10 + 10 \sin(2\pi t/P)$   
P = 5, 10, 20, 50 DAYS**